

In the Claims:

Please amend the claims as follows.

Please cancel claims 15 and 54.

1. (Currently amended) A computational method of classifying a population by drug responsiveness, comprising:

(a) creating a multidimensional space of n dimensions, wherein n represents the number of different molecules being analyzed in a specimen from each individual in a population of individuals administered a drug and wherein said multidimensional space contains n axes, each of said axes relating to the expression level of a molecule of said n molecules, wherein n is 3 or more molecules and wherein said molecules are nucleic acids or polypeptides;

(b) determining ~~[[a]]~~ multidimensional coordinate ~~point~~ points for each individual in said population, wherein each of said multidimensional coordinate ~~point~~ points is representative of the expression levels of said n molecules in each of said individuals; ~~[[and]]~~

(c) determining a drug response-associated reference expression region of a group of individuals in said population using said multidimensional coordinate points, thereby classifying said group of individuals into a drug response reference population; and

(d) providing an output of said classification of said drug response reference population to a user.

2. (Original) The method of claim 1, further comprising the step of correlating said group of individuals with a response to said drug.

Claim 3 (Canceled).

4. (Original) The method of claim 2, wherein said response is alleviation of a sign or symptom associated with a condition of an individual administered said drug.

Claims 5-7. (Canceled)

8. (Previously presented) The method of claim 1, wherein the expression levels of said molecules are determined by contacting said specimen with a target.

9. (Original) The method of claim 1, wherein said specimen is selected from the group consisting of leukocytes, blood, and serum.

10. (Original) The method of claim 8, wherein said target is an array.

11. (Original) The method of claim 1, wherein said molecules in said specimen comprise nucleic acids.

12. (Original) The method of claim 8, wherein said target comprises nucleic acid ligands.

13. (Original) The method of claim 1, wherein said molecules in said specimen comprise polypeptides.

14. (Original) The method of claim 8, wherein said target comprises antibody ligands.

Claim 15 (Canceled).

16. (Currently amended) A computational method of classifying a population by drug responsiveness, comprising:

(a) creating a multidimensional space of n dimensions, wherein n represents the number of different molecules being analyzed in a specimen comprising leukocytes from each individual in a population of individuals administered a drug and wherein said multidimensional space contains n axes, each of said axes relating to the expression level of a molecule of said n molecules, wherein n is 3 or more molecules and wherein said molecules are nucleic acids or polypeptides;

(b) determining [[a]] multidimensional coordinate ~~point~~ points for each individual in said population, wherein each of said multidimensional coordinate point points is representative of the expression levels of said n molecules in each of said individuals; [[and]]

(c) determining a drug response-associated reference expression region of a group of individuals in said population using said multidimensional coordinate points, thereby classifying said group of individuals into a drug response reference population; and

d) providing an output of said classification of said drug response reference population to a user.

Claims 17 – 43 (Canceled).

44. (Previously presented) The method of claim 16, further comprising the step of correlating said group of individuals with a response to said drug.

Claim 45 (Canceled).

46. (Previously presented) The method of claim 44, wherein said response is alleviation of a sign or symptom associated with a condition of an individual administered said drug.

Claim 47 (Canceled).

48. (Previously presented) The method of claim 16, wherein the expression levels of said molecules are determined by contacting said specimen with a target.

49. (Previously presented) The method of claim 48, wherein said target is an array.

50. (Previously presented) The method of claim 16, wherein said molecules in said specimen comprise nucleic acids.

51. (Previously presented) The method of claim 48, wherein said target comprises nucleic acid ligands.

52. (Previously presented) The method of claim 16, wherein said molecules in said specimen comprise polypeptides.

53. (Previously presented) The method of claim 48, wherein said target comprises antibody ligands.

Claims 54-56 (Canceled).

57. (Previously presented) The method of claim 1, wherein n is 5 or more molecules.

58. (Previously presented) The method of claim 1, wherein n is 10 or more molecules.

59. (Previously presented) The method of claim 1, wherein n is 20 or more molecules.

60. (Previously presented) The method of claim 1, wherein n is 50 or more molecules.

61. (Previously presented) The method of claim 1, wherein n is 100 or more molecules.

62. (Previously presented) The method of claim 1, wherein n is 200 or more molecules.

63. (Previously presented) The method of claim 1, wherein n is 500 or more molecules.

64. (Previously presented) The method of claim 1, wherein n is 1000 or more molecules.

Claim 65 (Canceled).

66. (Previously presented) The method of claim 16, wherein n is 5 or more molecules.

67. (Previously presented) The method of claim 16, wherein n is 10 or more molecules.

68. (Previously presented) The method of claim 16, wherein n is 20 or more molecules.

69. (Previously presented) The method of claim 16, wherein n is 50 or more molecules.

70. (Previously presented) The method of claim 16, wherein n is 100 or more molecules.

71. (Previously presented) The method of claim 16, wherein n is 200 or more molecules.

72. (Previously presented) The method of claim 16, wherein n is 500 or more molecules.

73. (Previously presented) The method of claim 16, wherein n is 1000 or more molecules.

Claims 74-83 (Canceled).